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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/302,859	04/30/1999	ROBERT ADAMS	AD-200J	7551

7590 11/04/2002

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EXAMINER

KIM, KEVIN

ART UNIT	PAPER NUMBER
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2634

DATE MAILED: 11/04/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

11

Office Action Summary

Application No.

09/302,859

Applicant(s)

ADAMS ET AL.

Examiner

Kevin Y Kim

Art Unit

2634

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 September 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed on September 16, 2002 have been fully considered but they are not persuasive.

Applicant traversed the rejection of claims 1,3,4,6,7 and 9 by contending that the operation amplifier (OA4) of Vallancourt, the prior art cited, does not provide any voltage gain. In support of this argument the relation between V_{out} and V_{in} was given in detail, as described in the prior patent. However, the relation between the input signal and output signal is not material because this feature is not recited in the claims. What is required in the claims is that the difference between the input and the feedback signals be amplified. With this claimed feature in mind, the Vallancourt patent should be studied to determine whether the difference between its input and feedback signals is amplified. The Table I shows the output V_{out} , which is feedback to the amplifier OA4, closely follows the input signal V_{in} , indicating any difference between the feedback signal and the input signal is amplified, most certainly with the gain being greater than one. Since the Vallancourt patent discloses the same structure as claimed, it follows that the patent invention is considered to "reduce the input-referred thermal noise by a factor of approximately the gain of the amplification" which is recited as the effect/result of the claimed features.

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim Rejections - 35 USC § 102

3. Claims 1,3,5,6,7, and 9 rejected under 35 U.S.C. 102(e) as being anticipated by Vallencourt (US 5,973,518).

Consider claims 1 and 7. Referring to Fig. 3, Vallancourt discloses “a filter system” comprising an input circuit (OA4), a sampling circuit (see capacitor and switched) and a feedback circuit. Regarding claims 4 and 9 additionally reciting a quantizer, see col.2, ll.19-26. The op amp (OA4) shown in Fig.4 reads on a summing circuit, recited in claims 3 and 6, because it receives an input signal and a feedback signal and provides an amplified difference between the two signals.

Claim Rejections - 35 USC § 103

4. Claims 2,4,8 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vallancourt (US 5,973,518).

Vallancourt disclose all the subject matter claimed but failed to specify the gain of the amplifier (OA4). However, it would have been obvious matter of design choice to vary the amplifier gain in the Vallancourt's apparatus to meet different performance requirements since applicant has not disclosed the claimed gain solves any stated problems or are for any particular purposes

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Liwicki (US 6,285,311) and Lie (US 4,585,956) each disclose a switched-capacitor sampling circuit with a feedback.

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6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kevin Y Kim whose telephone number is 703-305-4082. The examiner can normally be reached on 8AM --5PM M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Chin can be reached on 703-305-4714. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9314 for regular communications and 703-872-9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.

kvk
October 29, 2002


STEPHEN CHIN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600